

# Ritesh Agarwal

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## SUMMARY

A highly motivated and results-oriented software engineer with 15+ years of experience in C and distributed systems, leveraging expertise in building scalable and reliable software solutions.

## EXPERIENCE

### Lead Software Development Engineer

Zscaler

Apr 2024 - Present

Pune, MH, India

- Collaborated with cross-functional teams to define project requirements and deliver multiple high-quality/impact customer-focused features, resulting in a measurable increase of Net Annual Recurring Revenue(NARR).
- Expedited resolution of critical blocker issues across development, release and production (mainline) branches, maintaining continuous delivery pipelines and ensuring production stability.
- Enhanced team productivity and code quality by triaging bugs for efficient resolution, conducting thorough code reviews, and mentoring team members to accelerate their contributions.
- Streamlined weekly reporting processes by gathering and summarizing team status, enhancing visibility into project health for senior management and cross-functional partners.
- Acted as the on-call development engineer for the India Time Zone (IST), providing frontline support for production systems and resolving critical alerts and incidents on a rotational basis.
- Made use of structured interviewing techniques to ensure standardized, fair, and effective candidate evaluation, enhancing both candidate experience and organizational brand value.

### SKILLS

- C, PostgreSQL, Redis, FreeBSD, RAFT, Perl, Shell Scripting, Python, Gdb, Data Structures, Algorithms, Gemini/ChatGPT GenAI, iocage, cmocka, PagerDuty, Jenkins, Vmware ESXi, Vmware vCenter, Recovery Point Objective (RPO), Recovery Time Objective (RTO), CyberSecurity, Distributed Systems

### Lead Software Development Engineer

Pubmatic

2019 - Apr 2024

Pune, MH, India

- Developed and led multiple customer-targeted and strategic projects and ensured that features were delivered with no open static code analyser warnings, 70-80% Cmocka Dev Unit Test coverage with Address Sanitizer checks, 80-90% QA Automation Coverage and small-scale A/B and Sanity production testing including backward-compatibility and end-to-end tests leading to multiple successful feature deliveries with high quality ensuring timely and smooth releases.
- Oversaw multi-geo week-long phased releases (20%, 50%, 100%) by analyzing KPIs between new and mainline code, providing timely and reliable go/no-go decisions at each stage to ensure production stability and enable successful and timely rollouts or necessary investigations/rollbacks.
- Enhanced project visibility for senior management and cross-functional partners by streamlining weekly reporting, providing concise summaries of team status and key insights.
- Reduced surprise issues and design gaps by promoting truth table-based requirement discussions, ensuring comprehensive scenario analysis and early issue detection when costs are lowest.
- Guided an 8-member cross-functional Agile team (Development and QA) as Scrum Master and Team Lead, significantly enhancing Agile maturity from foundational Level 0 to advanced Level 4 through consistent encouragement and implementation of best practices.
- As Scrum Master for a distributed team (US/India), facilitated Agile ceremonies to align on acceptance criteria and dependencies, and drove a continuous improvement culture through post-sprint feedback, resulting in fewer re-opened stories, greater sprint commitment accuracy, and a tangible reduction in team impediments.
- Developed and deployed a suite of engineering tools for static code analysis, memory error detection (Address Sanitizer), and a containerized (Docker) development environment, leading to a significant improvement in code quality and developer efficiency.

### SKILLS

- C, Go, Java, MySQL, Redis, Redis(TimeSeries), Aerospike, Snowflake, Apache Druid, InfluxDB, Analytics, Grafana, Address Sanitizer, Docker, Codesonar, Zeppelin, Jupyter, Linux, clang, lex, yacc, JSON, Agile, Shell Scripting, Python, Gdb, Data Structures, Algorithms, cmocka, Jenkins, emacs, cscope, opengrok, WURFL, AdTech, Distributed Systems, REST, multithreading

## Senior Software Development Engineer

Cisco Systems

2015 - 2018

San Jose, CA, US and Bengaluru, KA, India

- Led the development and maintenance of core infrastructure components (Syslog, Sdwrap, Mtrack) for Cisco's Nexus Series, directly contributing to the stability and feature set of a market-leading networking product.
- As a key contributor to Cisco's Virtual Packet Core (VPC) NFV platform, independently designed and implemented features and POCs, helped reach various Product Milestones of the strategic initiative.
- Made significant contributions to the Virtual Packet Core through a series of milestone-driven projects, including DPDK integration, Virtio/Pass-through/SRIOV POCs, Bulkstats implementation, and a 32-bit to 64-bit migration.

## SKILLS

- C, Socket Programming, Linux, KVM Virtualization, Vmware ESXi, Libvirt, QEMU, Valgrind, clang, Agile, Shell Scripting, Python, Gdb, Data Structures, Algorithms, Jenkins, emacs, cscope, opengrok, Distributed Systems, Networking, Syslog, NFV, Virtual Packet Core, Cisco Nexus, Lab setup/management, UDP, TCP, make, tcpdump, wireshark, Coverity, TCP TLS, Cryptography, Memory Leak Detection, Linux Signal Handling, Linux Bringup, Virtual Memory, GDB core analysis, multithreading, DPDK (Data Plane Development Kit)

## Graudate/Research Assistant

University of Illinois, Chicago

2013 - 2015

Chicago, IL, US

- Point 1

## SKILLS

- C, Socket Programming, Linux, KVM Virtualization, Vmware ESXi, Libvirt, QEMU, Valgrind, clang, Agile, Shell Scripting, Python, Gdb, Data Structures, Algorithms, Jenkins, emacs, cscope, opengrok, Distributed Systems, Networking, Syslog, NFV, Virtual Packet Core, Cisco Nexus, Lab setup

## Graudate Summer Intern

Yahoo! Inc

2013

Sunnyvale, CA, US

- Point 1

## SKILLS

- C, Socket Programming, Linux, KVM Virtualization, Vmware ESXi, Libvirt, QEMU, Valgrind, clang, Agile, Shell Scripting, Python, Gdb, Data Structures, Algorithms, Jenkins, emacs, cscope, opengrok, Distributed Systems, Networking, Syslog, NFV, Virtual Packet Core, Cisco Nexus, Lab setup

## Software Development Engineer

Cisco Systems

2010 - 2012

Pune, MH, India

- Point 1

## SKILLS

- C, Socket Programming, Linux, KVM Virtualization, Vmware ESXi, Libvirt, QEMU, Valgrind, clang, Agile, Shell Scripting, Python, Gdb, Data Structures, Algorithms, Jenkins, emacs, cscope, opengrok, Distributed Systems, Networking, Syslog, NFV, Virtual Packet Core, Cisco Nexus, Lab setup

## Education

### Stanford University

Sept 2016 - Jun 2020

Master of Science in Computer Science

Stanford, CA

- GPA: 3.8/4.0
- Relevant Coursework: Algorithms, Data Structures, Artificial Intelligence, Machine Learning

## Projects

### Personal Website | HTML, CSS, JavaScript, React

Oct 2023 - Present

- Developed a personal website to showcase my portfolio and skills.
- Implemented a responsive design to ensure optimal viewing on all devices.

## Skills

Languages: Python, Java, C++, JavaScript

Frameworks: React, Node.js, Django, Flask

Databases: MySQL, PostgreSQL, MongoDB

Tools: Git, Docker, Kubernetes, Jenkins